

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MURALEEDHARAN G. NAIR,
HAIBO WANG, GALE M. STRASBURG,
ALDEN M. BOOREN and JAMES I. GRAY

Appeal No. 2006-1163
Application 09/761,143

ON BRIEF

Before WARREN, KRATZ and DELMENDO, *Administrative Patent Judges*.

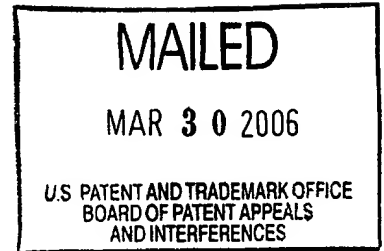
WARREN, *Administrative Patent Judge*.

REMAND TO THE EXAMINER

We remand the application to the examiner for consideration and explanation of issues raised by the record. 37 CFR §41.50(a)(1) (2005); Manual of Patent Examining Procedure (MPEP) § 1211 (8th ed., Rev. 3, August 2005).

The examiner advances on appeal only the ground of rejection of the appealed claims under 35 U.S.C. § 112, first paragraph, written description requirement,¹ on the basis that “[t]he specific mixture[,] cyaniding with an anthocyanin, is not specifically taught or implied in the original disclosure and therefore constitutes new matter” (answer, pages 3-4).

¹ The examiner has withdrawn the grounds of rejection under 35 U.S.C. § 103(a) (answer, pages 2-3).



Appellants point out in argument that they disclose at page 8, ll. 27-30, of their specification “the ‘mixture of anthocyanins, bioflavonoids, and phenolics,’” that “[t]his mixture is again taught in original claim 15,” and that “anthocyanin is clearly described in the instant specification as including cyaniding within the broad category of anthocyanin” at page 5, l. 37, to page 6, l. 3, of the specification, thus arguing that appellants are using “the terms ‘anthocyanin’ for describing the glycosolated forms of this general category of compounds and cyaniding for the aglycone form of this general category” (brief, page 12).

The examiner contends that “although Appellants have redefined this term [‘cyanidin’] in the Specification, cyanidin is actually an anthocyanidin” wherein “cyanidin is the core aglycon structure of all anthocyanins and may be separated from the o-glycoside by hydrolysis with a strong acid such as HCL as taught in the specification (p. 17-19),” and that “cyanidin is found in nature in the glycosidic anthocyanin form” (answer, page 6). Thus, the examiner concludes that the mixture described at page 8, ll. 27-30, of the specification “is not referring to cyanidin, because cyanidin is not found as a naturally occurring phytochemical without the o-glycoside attachment (as it was pointed out [above], cyanidin must be hydrolyzed from the naturally occurring anthocyanin which is the o-glycoside of cyanidin)” (answer, page 7).² Thus, the examiner concludes that “based on the Application, Appellants contemplate the use of the anthocyanins separately, or cyanidin separately, or a mixture of anthocyanins, bioflavonoids and phenolics isolated from a cherry, [however,] the Specification does not teach any embodiment which includes a mixture of anthocyanin and cyanidin” (answer, page 7).

In the reply brief, appellants disagree with the examiner’s position that “cyanidin did not occur in nature (such as cherries),” on the basis that it “is not consistent with the art cited in the

² We fail to find in claim 15 as originally presented, the language “anthocyanin including cyanidin” as stated by the examiner (answer, page 7). As originally presented:

1. A method for inhibiting cyclooxygenase or prostaglandin H synthase enzymes which comprises: providing at least one compound isolatable from a cherry with at least one of the enzymes to inhibit the enzymes.
15. The method of Claim 1 wherein the compound is contained in a composition which comprises a dried mixture of isolated anthocyanins, bioflavonoids and phenolics from cherries and a food grade carrier. [Specification as filed, pages 23 and 25.]

specification . . . particularly Dekazos³] . . . [who] discusses Montmorency cherries and other sour cherries and Table 2 clearly identified ‘cyanidin’ as a color pigment in the skin” (pages 1- 2). Appellants point out that the whole cherry, skin and pulp, was processed in specification Examples 1 and 2 (*id.*, page 2). Thus, appellants submit that “cyanidin clearly occurs in nature and is in the naturally derived compositions described in the application,” and that “[t]he hydrolyzed glycosylated anthocyanins were used to obtain enough for testing in the Examples” (*id.*).

Appellants disclose in the written description in their specification that “the present invention provides a natural cherry composition containing a mixture of anthocyanins, bioflavonoids and phenolics for use as anti-inflammatory agents as a result of inhibition of the cyclooxygenase enzymes” (page 1, ll. 5-10). Appellants acknowledge only Dekazos as reporting “anthocyanin pigments in MONTMORENCY cherry as” including “cyanidin along with” certain anthocyanins including anthocyanins **2** and **3** of specification **FIG. 1**, noting that these two anthocyanins along with anthocyanin **1** of specification **FIG. 1** and another anthocyanin “were identified as main pigments in sour cherries” (*id.*, page 2, l. 35, to page 3, l. 6). Appellants further disclose “a method for inhibiting inflammation in a mammal which comprises: administering at least one bioflavonoid, anthocyanin or phenolic compound isolated from a cherry to the mammal,” and “a method of inhibiting inflammation in a mammal which comprises administering cyanidin to the mammal” (*id.*, page 5, ll. 28-36).

Appellants further specify “[t]he term ‘anthocyanins’ includes the color producing compounds contained in cherries. For the purpose of this application this includes the aglycone cyanidin” (*id.*, page 5, l. 37, to page 6, l. 3), and that “Figure 1 shows the structure of the isolated anthocyanins (colorants) from BALATON and MONTMORENCY cherries. The aglycon cyanidin has a hydroxy group at position 3” (*id.*, page 6, ll. 26-29). We find here that specification **FIG. 1** shows only the anthocyanins **1** through **3** we pointed to above. Specification **FIGs. 7** and **8** are dose-response curves for certain activities of “cyanidin” (*id.*, page 6, ll. 4-15).

³ Elias D. Dekazos (Dekazos), “Anthocyanin Pigments In Red Tart Cherries,” 35 *Journal of Food Science* 237-41 (1970).

Specification FIG. 5 illustrates “the steps in the method of producing the preferred isolate as described in Examples 1 and 2,” with the process leading to “[t]he isolated mixture of anthocyanins, bioflavonoids and phenolics” further described generally and in Examples 1 and 2 with Balaton and Montmorency cherries (*id.*, page 6, ll. 34-36, page 8, ll. 3-30, page 11, ll. 12-35, and Examples 1 and 2, particularly, page 12, l. 11, to page 13, l. 6, and page 13, ll. 14-15, 23-24 and 27-30). Specification Example 4 reports the separate testing of and separate results for “the mixture containing anthocyanins 1-3 (Figure 1),” and “[t]he aglycon cyanidin,” and that “anthocyanins are hydrolyzed in the gut of a mammal to cyanidin and other compounds,” (*id.*, page 15, ll. 2-18). It is further reported that “[a]nthocyanins 1-3 were purified from Balaton tart cherry by HPLC and were identified by ¹H and ¹³C NMR spectral data,” and “[t]o prepare cyanidin, the anthocyanin mixture containing 1-3 (Figure 1 . . .) was stirred with 3N HCL . . . [and] the reaction mixture was purified on a XAD-4 column as in the preparation of anthocyanins,” wherein the eluted “MeOH solution of cyanidin . . . evaporated to dryness” (*id.*, page 16, ll. 14-23). In specification Example 6, “[t]he composition of Example 1 and 2 were tested for anti-inflammatory activity (*id.*, page 21, ll. 27-28).

We find that the terms “aglycone cyanidin” and “aglycon cyanidin” used by appellants (specification, page 6, ll. 2-3 and 28-29), refer to “cyanidin,” that is, the structure contains a hydroxyl group in the 3 position as appellants disclose (specification, page 6, ll. 28-29). The compound cyanidin *per se* is known to be prepared by the acid hydrolysis of cyanin chloride and isolated from bananas⁴ However, the terms “aglycone” or “aglycon” have the accepted meaning that the compound so referred to is the product of the hydrolysis of the corresponding glycoside, with “aglycon cyanidin” as a typical example.⁵ In this respect, we note that Dekazos refers separately to “cyanidin” and to “cyanidin aglycone,” apparently in line with this distinction (page 237, cols. 1 and 2). Indeed, as the examiner points out, the only references to the preparation of

⁴ Monograph 2755. **Cyanidin Chloride**, *The Merck Index* 452 (Twelfth Ed., Whitehouse Station, NJ, Merck & Co., Inc., 1996),

⁵ See, e.g., “**aglycone**. A nonsugar hydrolytic product of a glycoside.” *The Condensed Chemical Dictionary Tenth Edition* 25 (Gessner G. Hawley, New York, Van Nostrand Reinhold Company, 1981); “**aglycon** The nonsugar compound resulting from the hydrolysis of glycosides; an example is . . . cyanidin.” *McGraw-Hill Dictionary of Scientific and Technical Terms* 47 (Sybil P. Parker, ed., New York, McGraw-Hill, Inc. 1994).

“cyanidin” in the written description in appellants’ specification is with respect to hydrolysis of anthocyanins, either in a reaction vessel or *in vivo*, and “aglycon cyanidin” was tested in specification Example 4.

The unqualified term “cyanidin” appears in appealed claims 1 and 15, and on this record refers to both cyanidin *per se* and aglycon cyanidin. The issues thus raised by appellants in the reply brief, relying on Dekazos, are whether one skilled in this art armed with the knowledge of the use of the terms cyanidin *per se*, aglycone cyanidin, aglycon cyanidin and cyanidin aglycone, and of Dekazos, in considering the disclosure in the written description in the specification would have recognized that cyanidin *per se* would have been present in the mixtures of anthocyanins, bioflavonoids and phenolics prepared from Balaton and Montmorency cherries following the protocol disclosed at specification **FIG. 5** and specification Examples 1 and 2; that the mixtures of specification Examples 1 and 2 tested in specification Example 6 contained containing cyanidin *per se*; that mixtures of anthocyanins **1-3** of specification **FIG. 1** tested in specification Example 4 contained cyanidin *per se*; and that cyanidin *per se* was separated from such mixtures.

The record shows that the examiner considered and entered the reply brief and thus Dekazos, which in any event, is in the record as set forth in the specification as filed. We find no form in the official electronic files of the USPTO indicating that Dekazos was officially made of record as considered by the examiner.

Accordingly, the examiner is required to take appropriate action consistent with current examining practice and procedure to enter Dekazos into the record and to consider the issues raised by appellants relying on this reference in the reply brief as we have stated these issues above, in light of our finding and discussion above of the written description in the specification and the meaning of the terms used therein, with a view toward placing this application in condition for decision on appeal with respect to the issues presented.

This remand is made for the purpose of directing the examiner to further consider the grounds of rejection. Accordingly, if the examiner submits a supplemental answer to the Board in response to this remand, “appellants must within two months from the date of the supplemental examiner’s answer exercise one of” the two options set forth in 37 CFR


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§41.50(a)(2) (2005), “in order to avoid *sua sponte* dismissal of the appeal as to the claims subject to the rejection for which the Board has remanded the proceeding,” as provided in this rule.

We hereby remand this application to the examiner, via the Office of a Director of the Technology Center, for appropriate action in view of the above comments.

This application, by virtue of its "special" status, requires immediate action. It is important that the Board of Patent Appeals and Interferences be informed promptly of any action affecting the appeal in this case. See MPEP § 708.01(D) (8th ed., Rev. 3, August 2005).

Remanded



CHARLES F. WARREN
Administrative Patent Judge



PETER F. KRATZ
Administrative Patent Judge



ROMULO H. DELMENDO
Administrative Patent Judge

BOARD OF PATENT
APPEALS AND
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